

KODAK*photo notes*

for registered owners of the
Kodak Reference Handbook
and the
Kodak Photographic Notebook

Are You Using Modern Processing Methods?



You can get twice the quality at half the cost in less time by using the latest methods of fixing and washing. If you are interested in saving water, you will be glad to know that water consumption is cut in half, too.

In a general way, photographic processing may be divided into two steps: (1) development of the exposed silver halide, and (2) removal of the unexposed silver halide in order to avoid the over-all stains which occur when residual silver salts in a print decompose on storage or when prints are toned.

A fresh fixing bath removes the silver very efficiently, but as it is used, it accumulates more and more silver which tends to be absorbed by the gelatin and paper base and requires longer washing times. As a result, if full freedom from stain is to be assured, relatively few prints can be fixed before the bath is discarded.

The Kodak Research Laboratories have found that at least twice as many prints can be fixed per gallon of fixer by using a two-bath fixing system. Furthermore, the print stability will be much greater because the silver content of the last bath will be one-third that of the single bath.

You can also wash the prints with half the water in half the time.

The steps for fixing and washing by this method are as follows:

1. Following normal development and 30 seconds in an acid stop bath, fix the prints for 3 to 5 minutes in each of two successive fixing baths.
2. Drain the prints, either singly or in a group, for 5 seconds or more between each bath.
3. Separate and agitate the prints while they are fixing.

4. After the last fix, rinse the prints briefly in clear water and then soak them in a solution of Kodalk Balanced Alkali for 2 minutes.

5. Wash the prints for 30 minutes in running water. Prints not given the Kodalk treatment should be washed for 1 hour in running water. Whenever possible, keep the wash water between 65 and 75 F; washing efficiency is reduced rapidly at lower temperatures.

Changing the Fixer. With two 1-gallon baths, discard the first bath after fixing two hundred prints (8 x 10-inch or equivalent, e.g., eighteen hundred 2½ x 3½-inch prints). Move the second bath over to become the first bath. Put new fixer in the second bath, and you are all set for another cycle of the same number of prints. After every 5 cycles, discard the solutions and clean the trays.

Instead of keeping a print count, the change-over time can be determined easily by using the Kodak

Testing Outfit for Stop Baths and Fixing Baths to test the second bath. To 5 drops of the "B" solution, add 5 drops of water and 10 drops of the fixer. If heavy yellow matter forms, the bath should be discarded. Any slight milkiness can be ignored.

Using a single bath, comparable quality cannot be maintained for more than fifty 8 x 10-inch prints per gallon, although quality acceptable for many commercial purposes may be obtained at a 100-print-per-gallon rate.

Kodalk Balanced Alkali can be obtained from your Kodak dealer in 1-pound bottles for 45 cents each. The mixing of the solution is not critical, and although we recommend a 2 percent solution, you can use it in the proportion of 1 teaspoonful of alkali to 1 quart of water, or 1 table-spoonful to 1 gallon.

Short fixing times are desirable for keeping to a minimum the absorption of silver and hypo by the paper fibers.

The exhibitor and professional illustrator alike will appreciate the ability of Kodak Royal Pan Film to maintain separation in the delicate highlight tones while also holding a similar separation between barely perceptible gradations in shadow areas.



Short of Water?



To conserve water and still get good, long-lasting photographic results, remember:

1. Use a stop bath after development.
2. Don't overfix. Overlong soaking in the hypo tends to bleach out the image and, in the case of prints, to cause the paper backing to soak up more hypo which takes longer to wash out.
3. Minimize carry-over of chemical solutions by allowing a short draining period, or better yet, squeegee lightly between baths.
4. Use the two-bath fixing method described here. Besides quicker elimination of hypo, it also prevents a build-up of silver salts which, if not removed, also reduce the life of photo materials.
5. Temper very cold water. Water at 70 F is 40 percent more efficient than water at 40 F.
6. The use of a 2 percent solution of Kodak Balanced Alkali after fixing serves a double purpose: Hypo removal is easier, and the residual alkali retards the fading action of the residual hypo.
7. Clear sea water can be used effectively provided a sufficient number of final rinses in fresh water are given to remove the salt water completely. Wash films and prints in sea water for about half the normal time; follow by a 5-minute wash in fresh water.

For those who process large quantities of photo materials, water shortages can be a serious matter. A comprehensive article on this subject has been written by J. I. Crabtree, of the Kodak Research Laboratories, and can be obtained by writing to the Sales Service Division, Eastman Kodak Company, Rochester 4, New York. Ask for J-7, *How to Save Water in Photographic Processing*.

Please Note:

✓ The new filter factors recommended for Kodak Royal Pan Film are:

Filter	Sunlight	Photoflood
K1 (No. 6)	1.5	1.5
K2 (No. 8)	2	1.5
G (No. 15)	3	2
X1 (No. 11)	4	3
F (No. 29)	25	12
A (No. 25)	8	5
No. 58 (B)	8	6
No. 47 (C5)	6	12
Pola-Screen	2.5	2.5
No. 47B	8	16
No. 61	12	10

✓ Starting about August 1, 1954, those stereo photographers in the New York area should send their K335 and K335A films to the address below for processing and stereo mounting:

Kodak Processing Laboratory
Box 814, General Post Office
New York 1, N. Y.

These films will be processed in our new Processing Laboratory at New Jersey (already processing K828 and K135 films).



Ever try stereo photography? Here's news for both the embryo and experienced 3-D fan. For the first time in the current revival of this venerable art, you can have a camera with extreme snapshot ease, famous Kodak quality, and an appealing price. The news is the introduction of the Kodak Stereo Camera and companion viewers.

Although this is the first stereo camera that Kodak has marketed since 1924, it's hardly an exaggeration to say that Kodak has never really been out of stereo photography. The earlier great stereo boom lasted from around 1890 to 1924. Stereopticon slides and viewers in

KODAK AND STEREO

nearly every front parlor became an indelible part of the American scene.

During these 34 years, Kodak produced a steady parade of constantly improving stereo cameras. It started, strangely enough, with the No. 2 Stereo Kodak of 1901 and included the Stereo Hawkeye of 1904, the Stereo Brownie Camera of 1905, and the Stereo Kodak, Model 1, which first appeared in 1917 and remained on the market until around 1924.

Stereo projects continued at Kodak even after the waning of public interest in 1924. Work on stereo motion pictures, especially in connection with the Kodak lenticular color process, occupied the late 1920's. The real groundwork for the present stereo renaissance was laid by Kodak when 35mm Kodachrome Film appeared on the market in 1936.

This immediately suggested three-dimensional photography in full color, and by 1938 a stereo camera which had been proposed earlier had been refined and whipped into approval shape. In 1940 the company was ready to begin production of this camera and other stereo equipment, but defense requirements and later the entry into the war forced complete abandonment of the program.



Kodak Stereo Camera

Kodak Stereo Services

Stereo Mounting for Use in Hand Viewers. Kodachrome Film, Daylight Type and Type A is supplied as No. 335 and No. 335A respectively for 35mm stereo camera users. When this film is returned for processing, the successful pairs will be mounted in cardboard mounts similar to the familiar Kodaslide Ready-Mounts. There is enough film in these magazines to yield 20 stereo pairs, assuming a stereo camera is used which makes standard-size frames (about 23 x 23mm) and uses standard spacings between the pairs. The cost of processing and mounting the successful pairs is included in the original price of the film. The mounts are intended for use in hand viewers *not* for projection. The pairs will not be mounted if they overlap more than $\frac{1}{8}$ inch.

Kodachrome Film, spooled for regular 35mm camera use, can also be used in a standard 35mm stereo camera. However, the original cost *does not* include a stereo mounting charge. It will *not* be mounted unless it is sent to one of our processing laboratories which also offers Stereo Mounting Service with a remittance of \$1.00 for a 20-exposure roll and \$1.60 for a 36-exposure roll. The standard charge applies regardless of how many pairs are actually mounted. These laboratories are listed later in this article.

If the mounting charge is not prepaid—that is, sent along with the film at the time it is sent to us for processing, the film will be returned to you



Kodak Stereo Viewer II

in strip form. These strips can be returned to us, provided they are uncut, with the standard charge for stereo mounting. We do not mount any transparencies, including stereo, between glass.

Our Stereo Mounting Services are available only from the following Kodak Processing Laboratories:

Kodak Processing Laboratory
1712 Prairie Avenue
Chicago 16, Illinois

Kodak Processing Laboratory
1017 North Los Palmas Avenue
Los Angeles 38, California



Inside the Kodak Stereo Viewer II

Kodak Processing Laboratory
Box 814, General Post Office
New York 1, New York
(After August 1, 1954)

Eastman Kodak Company
Film Processing Laboratory
Kodak Park
Rochester 4, New York

Kodachrome Prints and Enlargements. Regular Kodachrome Prints and Enlargements can be made from single frames of stereo pairs. The transparencies selected must be sharp and well exposed. *They must be ordered from your Kodak dealer, we cannot accept orders directly.* The Kodachrome Prints are the 3× size (3 by 3½ inches) and cover the entire area of the mounted standard size stereo transparency. List price: 75 cents each. A minimum charge of \$1.00 per order is made.

Two standard sizes are offered in Kodachrome Enlargements, 5 x 7 and 8 x 10 inches. Since the proportions of a standard stereo frame do not match these sizes, our lab technicians will crop the picture to fit either a horizontal or vertical format in the 5 x 7 or 8 x 10-inch size. They will use their own judgment in cropping the picture for the best effect. List price: 5 x 7-inch Kodachrome Enlargement, \$2.25 each; 8 x 10-inch, \$5.00 each.

These two sizes cover most requirements, but if special sizes, up to 8 x 10 inches, are required you can order them through your dealer, giving the size desired and indicating the approximate cropping. List price: Kodachrome Enlargement, Special Size, up to 5 x 7 inches, \$2.25 each. Over 5 x 7 and up to 8 x 10 inches, \$5.00.

Kodachrome Duplicates can be ordered from one or both frames of a standard size mounted stereo original. Single frames will not be mounted. Stereo pairs can be mounted in a stereo mount only if your dealer forwards the originals to us in Rochester (after August 1, 1954). List Price: Kodachrome Duplicate, Stereo Pair, 60 cents, Single Frame, 30 cents each, unmounted. There will be an extra charge for mounting.

Anti-Mildew Compounds Hurt Color Films

A number of color films have been processed which had been spoiled by exposure to paraformaldehyde, an ingredient in most anti-mildew preparations. The first effect on Kodachrome film is a color shift toward green, with increased graininess. In later stages, the film becomes very dense, often with a dark red appearance. Kodacolor negatives so affected have a milky translucent appearance. When printable, the prints are off color. Paraformaldehyde works in from the edges of the film and has the effect of hardening the gelatin of the film emulsion, therefore interfering seriously with the processing.

Typical exposure to this chemical occurs when a loaded camera is put in a clothes closet in which a bag of anti-mildew compound has been hung. Even when an empty camera is exposed to this vapor, enough of the vapor can stay in the camera to affect the film. If any opened package of film is subjected to such vapor — for example, when (Continued on page 8)

"WHAT'S NEW IN KODAK BOOKS?"

Revised Publications



The fifth edition of the *Processing and Formulas Data Book* is really a new book and has been renamed *Processing Chemicals and Formulas*. It supersedes

both the *Processing and Formulas Data Book* and the *Kodak Chemical Preparations Data Book*. It presents the latest information and techniques on processing principles, preparation of solutions, formulas, and descriptions of Kodak chemical preparations. The keeping qualities, useful life, and other characteristics of these solutions are given, together with instructions for their use.

New Publications



Vacation Europe with Your Color Camera. Going abroad? Europe, perhaps? Then here is a booklet we think will make your trip more photographically satisfying.

Like its counterpart, *Vacation USA with Your Color Camera*, its 64 pages are profusely illustrated in color. Also similar is the technique of giving specific exposures for specific places. Brief suggestions are made regarding equipment and customs regulations. There are many ideas given on *what* pictures will document your trip and a "word to the wise" on time planning to allow sufficient time at the more photoseenic spots.

The first section contains general

photo suggestions for a trip anywhere, special mailing instructions for both cine and still films. Also included is information about capturing the interiors of cathedrals, castles, art galleries, and museums with the light you find available there.

The last section has a list of photographic "musts"—the typical scenes which are most representative of the countries covered by the book.

An indispensable companion for the photo-traveler. List Price: 50¢ at Kodak dealers.



Better Snapshots of Your Children is the title of a new 36-page elementary booklet aimed principally at mothers and fathers of young children. It gives

examples of the ten pictures most parents want of their children. It tells with diagrams and simple steps just how to take each picture.

One at a time, flash-lamp, flood-lamp, daylight, close-up, and action shots of children are discussed. The booklet covers picture taking from babyhood to school age. List Price: 35¢ at Kodak dealers.



Snapshots Exposed is another new booklet on snapshooting, but this is slanted toward users of adjustable cameras who want to get better and more varied black-and-white snapshots. Its 32 pages cover camera operation and the complete low-down on indoor (Continued on page 8)

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Bring your Handbooks up-to-date by replacing outdated sections with the latest editions of these Kodak Data Books sold by Kodak dealers:

Flash Technique—First Edition
Kodak Lenses, Shutters, and Portra Lenses—Fourth Edition
Kodak Films (Black-and-White)—Sixth Edition
Filters and Pola-Screens—Copyright 1950
Enlarging with Kodak Materials and Equipment—First Edition
Kodak Papers—Fifth Edition
Processing Chemicals and Formulas—Fifth Edition
Copying—Fourth Edition

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"what's new in Kodak books?"

(Continued from page 7)

and outdoor shots. Some of the basic principles which make photography possible are explained in one section.

There are discussions and illustrations on the use of filters, Kodak Portra Lenses, and various other picture-taking aids. And there are tips on action photography, outdoor and indoor lighting, and composition. List Price: 35¢ at Kodak dealers.

anti-mildew compounds

(Continued from page 6)

packed in a suitcase with clothes so treated—the film may be affected. While the worst offender seems to be the compounds of formaldehyde, others, such as the paradichlorobenzene often contained in insect and moth repellents, are also harmful.

Therefore, keep both your camera and any opened film away from such influences. Unopened packages of color film are sufficiently vapor-tight so that such precautions are unnecessary in ordinary circumstances.